

REMARKS

Claims 1-12 are pending in this application with claims 1, 2 and 8 being amended and claims 11 and 12 being added by this response. Claim 1 has been amended in accordance with the comments in the Office Action to include steps to be performed by the claimed method. In claim 1, the reference to the second and third control data have been switched from the original claim. Claim 2 has been amended to conform with the amendments to claim 1. Claim 8 is an apparatus claim which has been amended similarly to claim 1. Support for these amendments can be found throughout the specification. New claim 11 is dependent on claim 1 and adds additional features not previously claimed. New claim 12 is an apparatus claim dependent on claim 8 and includes features claimed in method claim 2. Accordingly, it is respectfully submitted that no new matter is added by this response.

Rejection of claims 1, 2, 4, and 8 under 35 U.S.C. 112, second paragraph

Claims 1, 2, 4, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1 and 8 have been amended for purposes of clarity in accordance with the comments in the Office Action to more explicitly claim the steps of the method. Claims 1, 2, 4 and 8 have been further amended for purposes of clarity in accordance with the comments in the Office Action to remove the terms within the “().” These terms identified the reference identifiers for the terms preceding the parentheses and thus, no new matter is added by these amendments. It is thus further respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of claims 1-7 under 35 U.S.C. 101

Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-7 have been amended in accordance with the comments in the Office Action to more clearly recite the tangible result produced by the claimed method.

In view of the above remarks and amendments to the claims, it is respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of claims 1-7 under 35 U.S.C. 102(b)

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujinami (U.S. Patent No. 5,502,573), herein referred to as Fujinami.

The present claimed invention provides a method for decoding a data stream containing a first and a second substream, the first substream containing first and second multimedia data packets and the second substream containing control information. The multimedia data packets contain an indication of the time to be presented and are decoded prior to their indicated presentation time. First, second and third control data are extracted from the control information of the second substream. The first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered and the third control data are suitable for defining a mode for buffering the second multimedia data packets. Buffer size is allocated in a buffer according to the first control data. The first decoded multimedia data packets are stored in the buffer. One or more multimedia data packets are stored according to the second control data in the buffer. Depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer.

Fujinami describes controlling of data decoding as a function of synchronization errors in a device for decoding and reproducing multiplexed audio/video data. Timing data are generated, and video and audio data are synchronized with respect to these timing data. If an audio packet is erroneous, audio muting is performed in order to prevent a click sound (col.12, l.37-42). If a video packet is erroneous and cannot be reproduced, the included frame is skipped (col.4, l.32-33 and Fig.9d). The decoder is caused to delay the decoding of video data in the video buffer until re-read video data is

supplied to the video buffer (col.7, l.23-30), and a previous frame is repeated during this time (see Fig 3(f) and col.12, l.20-26).

In particular, erroneous video packets are those for which error correction in the ECC block failed. In such case, the ECC block cannot output the packet towards the buffer (col.13, l.58-61), since it has no correct packet yet. In Fujinami, a control circuit receives a status indication from the ECC circuit. Upon this indication, re-reading of the erroneous data sector is performed. The data from the re-read data sector is delivered to the ECC circuit and then output to the buffer. Thus, the buffer receives only correct data packets, presumably in the correct order, since no incorrect data packets leave the ECC block. Consequently, there is no replacement of packets in a buffer disclosed. In all cases disclosed by Fujinami the buffer receives its input from an ECC circuit, because the stages following the ECC circuit require a substantially steady stream (col.4, l.11-44).

The Office Action contends that, in Fujinami, control information containing first, second and third control data are part of the data stream to be decoded. Applicant respectfully disagrees. In Fujinami, control data are generated according to the status of the ECC block (col.13, l.55-60), and are not extracted from the data stream to be decoded as in the present claimed invention. Thus, unlike the present claimed invention, Fujinami neither discloses nor suggests that the control information containing first, second and third control data are part of the data stream to be decoded. Therefore, Fujinami neither discloses nor suggests “extracting from said control information of the second substream first, second and third control data” as recited in claim 1 of the present invention.

Amended claim 1 comprises the feature “wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer”. This amendment clarifies that there is a choice, namely either appending the decoded data to previously buffered data (as in normal operation), or replacing previously buffered decoded data, and that the decision is made

according to the third control data. Neither such choice nor the feature of replacing data in a buffer is disclosed or suggested by Fujinami. Consequently, also appropriate control data are not disclosed there. Thus, Fujinami neither discloses nor suggests “wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer” as recited in claim 1 of the present invention.

Claim 2 is dependent on claim 1 and thus is patentable for the same reasons discussed above regarding claim 1. Claim 2 is also patentable because Fujinami neither discloses nor suggests “wherein the third control data defines one of a plurality of operation modes, wherein in a first mode buffering of multimedia data packets is performed when the value of the first control data changes, and in a second and third mode the second control data are valid for specifying the multimedia data packets to be buffered, wherein in the second mode the multimedia data packets replace the buffer contents and in the third mode the multimedia data packets are appended to the buffer contents” as recited in claim 2. As to claim 2, Fujinami discloses PACK_START_CODE, VIDEO_PACKET_START_CODE and AUDIO_PACKET_START_CODE, which are unique bit patterns for identifying the beginning of respective packets within a bit-stream. This means that e.g. each video data packet starts with VIDEO_PACKET_START_CODE, but VIDEO_PACKET_START_CODE is not unique for individual video data packets: all have the same start code. Therefore, these bit patterns are not suitable for specifying the multimedia data packets to be buffered, as claimed in claim 2. Thus, Fujinami neither discloses nor suggests “wherein the third control data defines one of a plurality of operation modes, wherein in a first mode buffering of multimedia data packets is performed when the value of the first control data changes, and in a second and third mode the second control data are valid for specifying the multimedia data packets to be buffered, wherein in the second mode the multimedia data packets replace the buffer contents and in the third mode the multimedia data packets are appended to the buffer contents” as recited in claim 2 of the present invention.

Claim 4 is dependent on claim 1 and thus is patentable for the same reasons discussed above regarding claim 1. Claim 4 is also patentable because Fujinami neither discloses nor suggests “the method is utilized in an instance of a processing node and wherein the first control data defines the allocated buffer size at node creation time” as recited in claim 4. Fujinami does not show “instance of a processing node, wherein the first parameter defines the allocated buffer size at node creation time”, since the hardware implementation of Fujinami does not have a “node creation time”.

Claim 6 is dependent on claim 1 and thus is patentable for the same reasons discussed above regarding claim 1. Claim 6 is also patentable because Fujinami neither discloses nor suggests “a label attached to the buffered data packets [that] contains an index relative to the latest received data packet” as recited in claim 6. The purpose of the disclosed packet start codes of Fujinami is explained above with respect to claim 1. Thus, Fujinami neither discloses nor suggests “a label attached to the buffered data packets [that] contains an index relative to the latest received data packet” as recited in claim 6.

In view of the above remarks and amendments to the claims it is respectfully submitted that there is no 35 USC 112 enabling disclosure in Fujinami that would anticipate the present claimed invention. It is thus further respectfully submitted that this rejection is satisfied and should be withdrawn.

Rejection of claims 8-10 under 35 U.S.C. 102(e)

Claims 8-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Jebb et al. (U.S. Patent Publication No. 2005/01200380) herein referred to as Jebb.

The present invention as claimed in claim 8 provides an apparatus for decoding a data stream, the data stream containing a first and a second substream, the first substream containing first and second multimedia data packets and the second substream containing control information, wherein the multimedia data packets contain an indication of the time when to be presented and are decoded prior to their indicated

presentation time, and wherein the first and second multimedia data packets are buffered. The apparatus includes buffering means for buffering of the first and the second multimedia data packets. Means for extracting extracts first, second and third control data from the control information of the second substream. The first control data are suitable for defining buffer size to be allocated, the second control data are suitable for defining one or more second multimedia data packets to be buffered and the third control data are suitable for defining a mode for buffering the second a multimedia data packets. Means for allocating, in the buffer, allocates buffer size according to the first control data. Means for storing stores the first decoded multimedia data packets in the buffer. Means for storing stores one or more multimedia data packets according to the second control data in the buffer. Either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer depending on the third control data.

Jebb describes a data structure for storing a data source for a streaming system, which is based on scaling of transmission bit rate in dependence on changing network conditions. When switching between different streams, so-called switching streams are passed in order to prevent visual artifacts. The client provides to the server information about its decoding buffer filling and receive data rate, and the server determines when to switch between streams ([0069]). Then the server transmits switching stream data instead of the original data ([0053]). For correct timing of the data decoding and for audio/video synchronization, time stamps are used ([0077]).

The Office Action contends that the feature of replacing of buffered packets by received packets in a certain mode while appending received packets to buffered packets in another mode, are disclosed by Jebb. However, Jebb delivers only already sorted packets to the buffer, so that replacing of previously buffered packets is not necessary. Moreover, Jebb neither discloses nor suggests “means for storing one or more multimedia data packets according to the second control data in the buffer, wherein depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace

some or all of the first decoded multimedia data packets in the buffer" as recited in claim 8 of the present invention. Additionally, Claim 8 has been amended similarly to claim 1 to clarify the choice exists between appending the decoded data to previously buffered data (as in normal operation) and replacing previously buffered decoded data. This feature is neither shown nor suggested by Jebb. Thus, Jebb also neither discloses nor suggests "depending on the third control data either the second multimedia data packets are appended to the first decoded multimedia data packets in the buffer, or replace some or all of the first decoded multimedia data packets in the buffer" as recited in claim 8 of the present invention.

In view of the above remarks and amendments to the claims it is respectfully submitted that there is no 35 USC 112 enabling disclosure in Jebb that would anticipate the present invention as claimed in claim 8. Claims 9 and 10 are dependent on claim 8 and thus are patentable for the same reasons as claim 8 discussed above. It is thus further respectfully submitted that this rejection is satisfied and should be withdrawn.

New claim 11 is a method claim dependent on claim 1 and thus is considered patentable for the same reasons as claim 1 discussed above. New claim 12 is an apparatus claim dependent on claim 8 and thus is considered patentable for the same reasons as claim 8 discussed above.

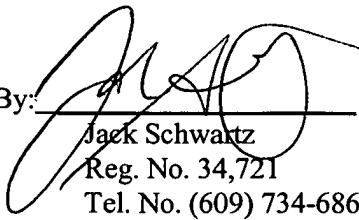
Having fully addressed the Examiner's rejections, it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's attorney at the phone number below, so that a mutually convenient date and time for a telephonic interview may be scheduled.

Serial No. 10/563,709

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No fee is believed due. However, if a fee is due, please charge the additional fee
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Respectfully submitted,
Jurgen Schmidt

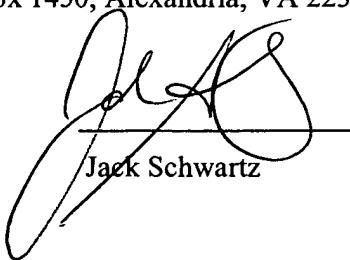
By: 
Jack Schwartz
Reg. No. 34,721
Tel. No. (609) 734-6866

Thomson Licensing LLC.
Patent Operations
PO Box 5312
Princeton, NJ 08543-5312
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